

- 0032

From: Priscilla Burton
To: OGMCOAL
Date: 6/1/2009 11:49 AM
Subject: Fwd: 0070041 Incoming RE: MSDS flocculant
Place: OGMCOAL
Attachments: MSDS.pdf; Bench test.pdf

*Incoming
C/007/0041**OK*

>>> Ingrid Wieser Monday, June 01, 2009 6:54 AM >>>

>>> "Shaver, Dave" <dshaver@coalsource.com> 5/29/2009 9:25 AM >>>

Gentlemen (and Ingrid)...Attached is the MSDS sheet for the flocculant we propose to use in the cleanup of the coal fines. Also attached is a summary of the bench test. The results are very encouraging. Please review this material and let me know if you are OK with using this floc, since I need to order it as soon as possible so that we can begin the cleanup test by the earliest day possible. Please note that the "potential environmental hazard" is rated as Low. It will take several weeks to deliver the chemical and the pumping equipment, and another week to get it all set up. I have scheduled to take my daughter back to Philadelphia during the week of June 15 - 19, and will need the following week to get everything ready for the test run. Therefore, I would like to propose that we begin the clean-up test early in the week of June 29, on whatever day suits everyone's schedule the best. Please let me know if this works for you. Thanks

Dave

POL-E-Z® 83400

Quick Inverting Latex Flocculant



Product Bulletin

PRODUCT BENEFITS

POL-E-Z 83400 has the following advantages over traditional latex flocculants:

- Inverts quickly, achieving 100% activity in seconds
- Requires no makeup equipment, saving thousands of dollars in capital costs
- Can be fed neat into solution and slurry lines
- Can be used in remote areas
- Minimal application labor required
- Dust-free handling

PRINCIPAL USES

POL-E-Z 83400 can be used in any application where traditional latex or powder flocculants are being used. This includes:

- Thickening
- Filtration and dewatering
- Clarification

POL-E-Z 83400 can be used to treat ore and waste in the following industries:

- Aggregates
- Coal
- Precious Metals
- Copper
- Iron Ore
- Phosphate
- Kaolin

GENERAL DESCRIPTION

POL-E-Z 83400 is a liquid anionic flocculant, which requires no makeup equipment, inverting quickly in most process solutions and slurries. This represents substantial cost savings in chemical makeup systems

to the user. POL-E-Z 83400 is a high molecular weight moderately anionic charged flocculant for use in liquid/solid separation applications. For typical chemical and physical properties, refer to the POL-E-Z 83400 Material Safety Data Sheet.

DOSAGE AND FEEDING

Dosage requirements for feeding POL-E-Z 83400 will vary greatly depending on application, required results, ore type and size. Your Nalco representative will be able to customize your flocculant program to achieve the optimum benefits. Your Nalco representative can also automate most feed systems, resulting in minimum operator involvement and maximum process throughput.

SHIPPING AND HANDLING

POL-E-Z 83400 is shipped in bulk quantities, one-way disposable totes and drums. Your Nalco representative can recommend the best program for your process and give valuable advice on storage and handling.

Read the label and Material Safety Data Sheet for complete handling information before using this product.

REMARKS

If you need assistance or more information on this product, please call your nearest Nalco Representative. For more news about Nalco, visit our Web site at www.nalco.com.

For Medical and Transportation Emergencies involving Nalco products, please see the Material Safety Data Sheet for the phone number.

Nalco Company 1601 West Diehl Road • Naperville, Illinois 60563-1198

SUBSIDIARIES AND AFFILIATES IN PRINCIPAL LOCATIONS AROUND THE WORLD

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**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION****PRODUCT NAME :** POL-E-Z® 83400**COMPANY IDENTIFICATION :** Nalco Company
1601 W. Diehl Road
Naperville, Illinois
60563-1198**EMERGENCY TELEPHONE NUMBER(S) :** (800) 424-9300 (24 Hours) CHEMTREC**NFPA 704M/HMIS RATING****HEALTH :** 1 / 1 **FLAMMABILITY :** 1 / 1 **INSTABILITY :** 0 / 0 **OTHER :**
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Based on our hazard evaluation, none of the substances in this product are hazardous.

3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW******CAUTION**

May cause irritation with prolonged contact.

Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. Protect product from freezing.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :**EYE CONTACT :**

Can cause mild to moderate irritation.

SKIN CONTACT :

Can cause mild irritation.

INGESTION :

Not a likely route of exposure. No adverse effects expected.

INHALATION :

Not a likely route of exposure. No adverse effects expected.

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(630)305-1000

**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****SYMPTOMS OF EXPOSURE :****Acute :**

A review of available data does not identify any symptoms from exposure not previously mentioned.

Chronic :

Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

4. FIRST AID MEASURES**EYE CONTACT :**

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get immediate medical attention.

SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

5. FIRE FIGHTING MEASURES**FLASH POINT :** > 200 °F / > 93 °C (PMCC)**EXTINGUISHING MEDIA :**

Foam, Dry powder, Carbon dioxide, Other extinguishing agent suitable for Class B fires

UNSUITABLE EXTINGUISHING MEDIA :

Do not use water unless flooding amounts are available.

FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****6. ACCIDENTAL RELEASE MEASURES****PERSONAL PRECAUTIONS :**

Notify appropriate government, occupational health and safety and environmental authorities. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

METHODS FOR CLEANING UP :

SMALL SPILLS: Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

7. HANDLING AND STORAGE**HANDLING :**

Do not take internally. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labelled. Avoid eye and skin contact.

STORAGE CONDITIONS :

Store separately from oxidizers. Store the containers tightly closed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**OCCUPATIONAL EXPOSURE LIMITS :**

This product does not contain any substance that has an established exposure limit.

ENGINEERING MEASURES :

General ventilation is recommended.

RESPIRATORY PROTECTION :

Due to its low volatility and toxicity, the hazard potential associated with this material is relatively low. Respiratory protection is not normally needed.

HAND PROTECTION :

Nitrile gloves, PVC gloves

SKIN PROTECTION :

Wear standard protective clothing.

EYE PROTECTION :

Wear chemical splash goggles.

**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****HYGIENE RECOMMENDATIONS :**

Keep an eye wash fountain available. Keep a safety shower available.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Viscous liquid
APPEARANCE	Opaque Off-white
ODOR	Citrus oranges
SPECIFIC GRAVITY	1.051 @ 74 °F / 23 °C
DENSITY	8.8 lb/gal
SOLUBILITY IN WATER	Miscible
pH (100 %)	6.6
FREEZING POINT	-20 °F /

Note: These physical properties are typical values for this product and are subject to change.

10. STABILITY AND REACTIVITY**STABILITY :**

Stable under normal conditions.

HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

CONDITIONS TO AVOID :

Freezing temperatures.

MATERIALS TO AVOID :

Addition of water results in gelling. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen

11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.

CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****HUMAN HAZARD CHARACTERIZATION :**

Based on our hazard characterization, the potential human hazard is: Low

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL EFFECTS :**

The following results are for a 1% aqueous solution.

ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Fathead Minnow	96 hrs	150 mg/l	Product

Rating : Essentially non-toxic

ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

LAND TRANSPORT :

Proper Shipping Name :

**PRODUCT IS NOT REGULATED DURING
TRANSPORTATION****AIR TRANSPORT (ICAO/IATA) :**

Proper Shipping Name :

**PRODUCT IS NOT REGULATED DURING
TRANSPORTATION****MARINE TRANSPORT (IMDG/IMO) :**

Proper Shipping Name :

**PRODUCT IS NOT REGULATED DURING
TRANSPORTATION****Nalco Company 1601 W. Diehl Road • Naperville, Illinois 60563-1198****(630)305-1000****5 / 8**

**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****15. REGULATORY INFORMATION****NATIONAL REGULATIONS, USA :****OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :**

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

CERCLA/SUPERFUND, 40 CFR 117, 302 :

Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :**SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :**

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

- | | |
|---|-----------------------------------|
| X | Immediate (Acute) Health Hazard |
| - | Delayed (Chronic) Health Hazard |
| - | Fire Hazard |
| - | Sudden Release of Pressure Hazard |
| - | Reactive Hazard |

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

None of the substances are specifically listed in the regulation.

CLEAN AIR ACT, Sec. 111 (40 CFR 60, Volatile Organic Compounds), Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

None of the substances are specifically listed in the regulation.

CALIFORNIA PROPOSITION 65 :

Substances known to the State of California to cause cancer are present as an impurity or residue.

**MATERIAL SAFETY DATA SHEET****PRODUCT****POL-E-Z® 83400****EMERGENCY TELEPHONE NUMBER(S)****(800) 424-9300 (24 Hours) CHEMTREC****MICHIGAN CRITICAL MATERIALS :**

None of the substances are specifically listed in the regulation.

STATE RIGHT TO KNOW LAWS :

None of the substances are specifically listed in the regulation.

NATIONAL REGULATIONS, CANADA :**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS CLASSIFICATION :

Not considered a WHMIS controlled product.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substances in this preparation are listed on the Domestic Substances List (DSL), are exempt, or have been reported in accordance with the New Substances Notification Regulations.

16. OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

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MATERIAL SAFETY DATA SHEET

PRODUCT

POL-E-Z® 83400

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight# (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight# CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS# CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department

Date issued : 02/23/2004

Version Number : 1.9



PROPOSAL

Customer: UTAH AMERICAN ENERGY
Address: 794 North 'C' Canyon Road
City: East Carbon State: Utah
Attention: Mr. Dave Shaver
Copy To: _____
NALCO Copy To: Ken Handerhan, Ken Smith, Craig Roach

Date: 05.28.09
Mine: Westridge
Postal: 84520

Dave,

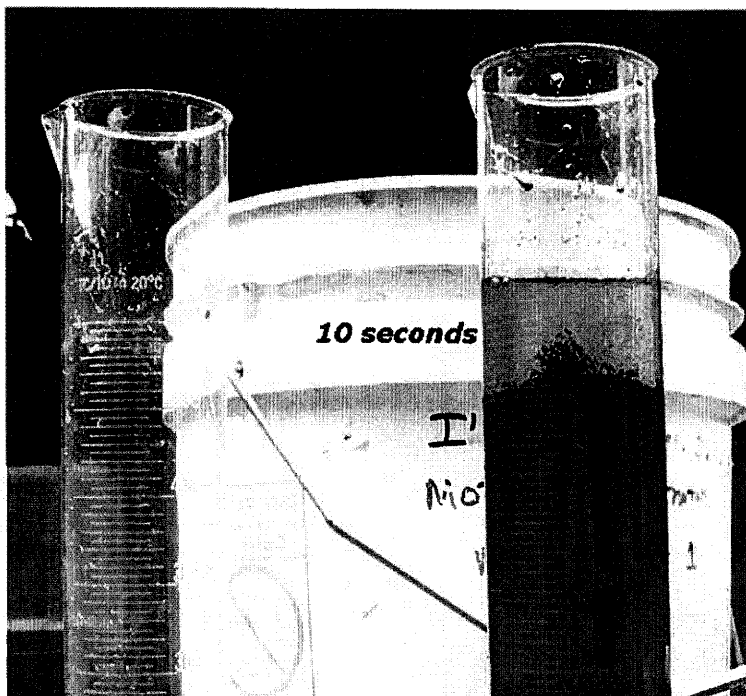
Below are some pictures of the settling tests using Nalco's POLEZ 83400. The slurry sample responded very well to low doses of 83400. At 5ppm we were able to achieve a settling rate of 8-10 inches/minute. The supernatant water clarity after settling should not warrant the addition of a cationic coagulant.

I recommend that you purchase two totes of the 83400 for the June 24th start up. Purchase information for the 83400 is listed on page 3. The equipment quote from Viking Machinery is attached to this email. Purchase arrangements for the equipment should be directly with Viking Machinery.

Please call me if you have any questions.

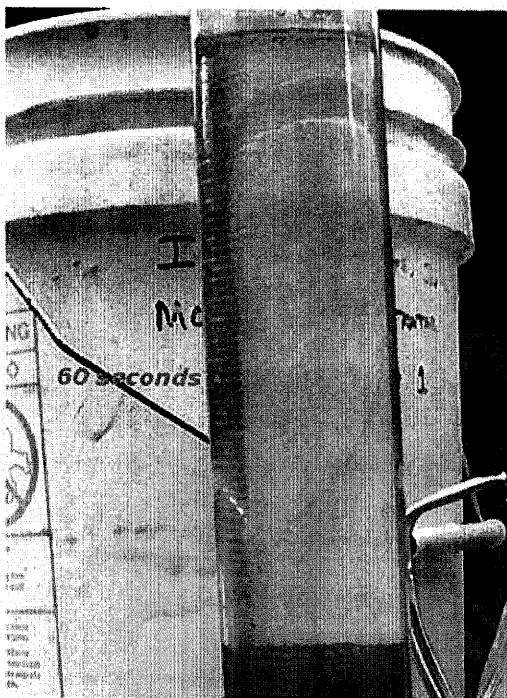
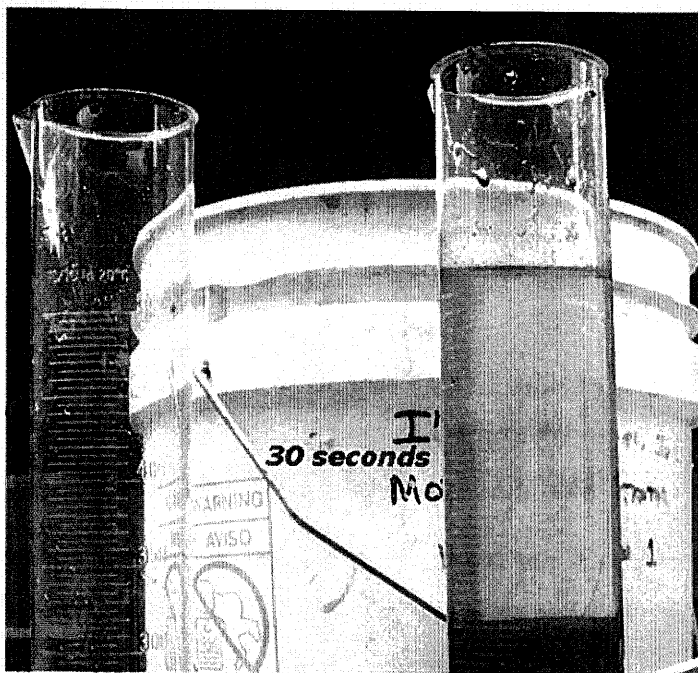
Sincerely,

Bill Schnieders
District Account Manager
Nalco Company





PROPOSAL





PROPOSAL

Product	Price / #	Price / Tote*
83400.61	\$1.55 / #	\$3,751.00 F.O.B. East Carbon, UT

This cost is based on a calculated weight of the product and the volume of the tote. For your records we can generate a firm price quote for each PO.

⇒ Recommended quantity for startup > 2 totes.

⇒ To order please contact: **Shelly Dreiling** – 303-431-6946, e-mail mdreiling@nalco.com